32. (New) The pressure sensor of claim 30 wherein the heater comprises an electrically conductive pathway passing through the member and a source of electrical current connected to pass electrical current along the electrically conductive pathway.

33. (New) The pressure sensor of claim 30 wherein the member comprises a bridge extending between a pair of cantilever members, each of the cantilever members having one end attached to the substrate and another end connected to the bridge.

34. (New) The pressure sensor of claim 30 wherein the member has a length in the range of 50 μm to 250 μm and a width in the range of 1 μm to 10 μm.

35. (New) The pressure sensor of claim 30 wherein the member comprises a generally linear elongated bridge supported above the substrate at either end, the bridge having a central portion collapsed onto and adhering by stiction to a surface of the substrate.

36. (New) The pressure sensor of claim 30 wherein the substrate comprises silicon and the member comprises polysilicon.

37. (New) A composite pressure sensor comprising first and second pressure sensors according to claim 30 arranged with first and second resistors in a Wheatstone bridge configuration having first and second output points and first and second input points, the first pressure sensor connected between the first input point and the first output point, the second pressure sensor connected between the second input point and the second output point, the first resistor connected between the first input point and the second output point and the second resistor connected between the second input point and the first output point.

38. (New) The pressure sensor of claim 30 wherein the member comprises a material selected from the group consisting of silicon, polysilicon, copper, aluminum and tungsten.

39. (New) The pressure sensor of claim 30 wherein the surface of the substrate is patterned with a pattern of plateaus and valleys in its portion under the member, the member is adherent by stiction to the plateaus, and the member is not in contact with the valleys.

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40. (New) The pressure sensor of claim 30 wherein the temperature sensor is located in the substrate under the member.

41. (New) A pressure sensor comprising a semiconductor wafer having a surface, an electrically conductive member in physical contact with the surface, at least one of the surface and the member comprising an electrically insulating barrier which electrically isolates the electrically conductive member from the surface of the semiconductor wafer, wherein at least one of a surface of the member in contact with the substrate and a surface of the substrate in contact with the member has a surface roughness in the range of nanometers to tens of nanometers.

42. (New) The pressure sensor of claim 41 wherein electrically insulating barrier is on the surface of the semiconductor wafer.

43. (New) The pressure sensor of claim 41 wherein the electrically insulating barrier is on the member.

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